

Chapter 3

Recommendations

This chapter presents the recommendations that will achieve the two primary goals set forth by this Plan:

1. **To increase bicycling activity throughout all parts of Louisville by making it a fun, comfortable and accessible mode of travel between 2010 and 2030;**
2. **To simultaneously reduce the number of cyclists killed and injured in crashes with motor vehicles.**

The recommendations in this chapter are supported by a number of appendices that provide more detailed actions that are needed to strengthen Louisville's policies and codes, make high priority corridors safer for people on bicycles, and generally ensure that all streets are designed to accommodate bicyclists.

The recommendations in this chapter are structured in the following way:

Recommendations are broad, but identify specific strategies for accomplishing the dual goals of this Plan. The responsibility for carry out the objectives will fall upon many different agencies and organizations. The objectives are summarized below:

Recommendation 1: Provide accessible, safe and well-maintained bicycle facilities along and across all streets.

Recommendation 2: Institute policies and practices to ensure that every street in Louisville meets the needs for bicyclists of all abilities

Recommendation 3: Establish education, encouragement and enforcement programs that support bicycle travel.

Objectives are provided for each of the recommendations listed above. Objectives are activities that will be undertaken in order to achieve the recommendations. Each objective will have specific strategies which have associated actions. Actions typically have a specific timeframe and are usually assigned to a specific agency or organization. For a full list of actions please refer to the Bike Master Plan Implementation Actions in chapter 4.

Programs

1.1 Complete the Louisville Loop

- a. Create a list of projects with a defensible, data-driven prioritization process that incorporates current and future demand, socio-economic measures, and land use in order to make the most of limited funds and to ensure that improvements best meet needs.
- b. Ensure the loop corridor is maintained at the highest standards for safe public use, connectivity, recreation, and transportation. Ensure stewardship of the corridor that enhances the physical and natural landscape.
- c. Coordinate right-of-way improvements adjacent to parks and the Louisville Loop to facilitate bicycle access to and from parks and to benefit the larger bicycle network. If the pathway/sidewalk must go on Parks' property, its primary purpose should be to provide access to/from the park.

- d. Leverage investments across funding programs and with a broad range of partners

1.2 Implement higher cost / high priority improvements using the prioritization criteria set forth in the Bike Master Plan

- a. Expand the bicycle system network with a defensible, data-driven prioritization process that incorporates cyclist demand, socio-economic measures, and land use in order to make the most of limited funds and to ensure that improvements best meet needs.

Expand the bicycle system network with a defensible, data-driven prioritization process...

1.3 Implement Lower cost / high priority improvements in the urban center using the prioritization criteria set forth in the Bike Master Plan

- a. Evaluate projects with a defensible, data-driven prioritization process that incorporates cyclist demand, socio-economic measures, and land use in order to make the most of limited funds and to ensure that improvements best meet needs.
- b. Combine portions of the Bike Master Plan infrastructure list into corridor projects for inclusion in LMPW's Capital Improvement Projects list.
- c. Incorporate safe and direct connectivity for bicycles into school zones by developing minimum standards for safe and direct connectivity for bicycles.
- d. Coordinate right-of-way improvements adjacent to parks and the Louisville Loop to facilitate bicycle access to and from parks and to benefit the larger bicycle network. If the pathway/sidewalk must go on Parks' property, its primary purpose should be to provide access to/from the park.
- e. Accommodate and improve bicycle access to and across bridges, railroads, state highways and through interchanges.
- f. Provide bicycle access across arterial streets and state routes that divide high demand bicycle areas. Prioritize projects for improvement using the Bike Master Plan criteria. Implement through corridor projects and with other available resources. Seek grant funding as needed.
- g. Review all design standards related to bicycle overpasses/bridges, underpasses, and stairway improvements and retrofits. Revise as needed to support safe bicycle passage. Address the following: acceptable slopes and grades to meet or exceed Public Rights-of-Way Accessibility Guidelines and design elements such as lighting, landscaping, public art, and street furniture that help to mitigate the impacts of the grade separation and improve personal security.

1.4 Establish criteria and set priorities for constructing bicycle facilities off road based upon condition, location and proximity, as well as current and future demand

- a. Create a single system to inventory, assess and track bike trails and other off road bicycle facilities.

...constructing bicycle facilities off road ...

1.5 Evaluate current signal timing practices and revise, as needed, to balance bicycle crossing delay and demand with full intersection functionality

- a. Evaluate and revise current signal timing practices, which focus on eliminating congestion, in balance with bicycle crossing demand and bicycle wait times as well as full intersection functionality. Initial focus should be placed on the Central Business District.

Policies

2.1 "Use existing resources to create more value for fewer dollars"

- a. "Coordinate bicycle improvements with construction projects such as roadway maintenance, repaving, painting, sewer and water works, and utility corridors."
- b. "Require routine bicycle accommodation with off-site impacts (both new or redevelopment), and a full transportation analysis, with performance based specifications."
- c. "Systematically use Council Members' discretionary funds for bicycle facility repairs and improvements."

"Use existing resources to create more value for fewer dollars"

- d. Coordinate work by the Economic Development Department, such as streetscape improvement programs and bicycle improvements.

2.2 Inspect and enforce right-of-way encroachments

- a. Advance the work of the LMPW working group on construction closures and implement recommendations to cover the following topics: 1) improve coordination between proximate construction sites' use of the right-of-way; 2) provide timely and easily accessible web-based information on current and planned bicycle construction closures with alternate routes; 3) review bicycle facilities and street closure fees, permitted closure lengths, and permit renewal requirements; 4) maintain bicycle access during construction, including keeping the bikeable zone free of signage and equipment; and 5) ensure that inspections are timely and frequent.

2.3 "Use Louisville's Complete Streets policy more fully"

- a. Give the Complete Streets Manual regulatory force by incorporating relevant portions into the Land Development Code (LDC).
- b. "Reduce the number of cases in which bicycle facilities may be eliminated by establishing clear, specific language in the LDC addressing under what circumstances facilities would not be required, taking into account all reasonable alternatives. "
- c. "Implement the Thoroughfare Typology hierarchy system adopted as part of the Complete Streets Manual, which matches facilities with functional class, design, speed and Form Districts."
- d. Allow Bike Louisville to oversee and coordinate multi-modal transportation review of development projects, and work with the governmental structure.
- e. Encourage the Kentucky Transportation Cabinet (KYTC) to use the Complete Streets Policy for state roads in Louisville Metro.

2.4 Create an expanded set of design standards for bicycle lanes facilities

- a. Prepare an expanded set of bicycle standards. Advance these standards through the LMPW review committee and Louisville's review committee. Publish design details in the Right-of-Way Improvements Manual.
- b. Develop specific standards for bicycle connectors between cul-de-sacs and other subdivision connections to ensure functionality and safety (size, width, fencing limitations, lights, etc.). Require full connectivity in subdivision design standards and retrofits.
- c. Establish street lighting standards to: 1) discuss bicycle-oriented lighting in more detail; 2) locate light posts in such a way as to maintain a clear bicycle zone; 3) include both retrofits and new construction in lighting design standards; and 4) achieve concurrency with International Dark Sky Association "approved dark-sky friendly" standards.

2.5 Define construction options for responsible agency to repair bicycle facilities

Ensure all sections the bicycle facilities are accounted for by the responsible agency.

Explore public/private cost-sharing possibilities for bicycle and streetscape improvements.

2.6 Update guidelines for crossing treatments

- a. Update guidelines for installing marked bike lanes and stop bars. Update bike lane marking guidelines to address the following issues: 1) define when to mark bike lanes at all legs of an intersection or at multiple intersections in a corridor; 2) develop criteria for marking bike lanes on non-arterials outside of school zones; 3) routinely install stop bars at all intersections with marked bike lanes; and 4) establish guidelines for the placement of stop bars so that new stop bars are coordinated with existing loop detectors.

2.7 Educate and Enforce "no parking" restrictions at intersection approaches

- a. Remove parking and increase enforcement of no standing or parking restrictions within 20 feet upon the approach to a intersection. Explore mechanisms other than signage to designate the restrictions in locations where signage does not currently exist. Update existing codes, as needed, to allow bicycle and scooter parking within this 20 feet zone in certain situations.

2.8 Address modal conflicts that result from Complete Streets implementation

- a. Ensure that the Bike Master Plan recommendations are coordinated with implementation and update activities for other modal plans (e.g., Thoroughfare Plan, Pedestrian Master Plan,) and other Metrowide strategic plans (e.g., Cornerstone 2020).

2.9 Use land use and zoning tools to encourage and support bicycle-friendly growth and development

- a. Evaluate and consider revising Land Development Code Form District standards to promote and provide incentives for wider use of bicycle-oriented development. Prioritize review of dimensional standards for non-residential and mixed-use developments in the suburban form districts of the Land Development Code to assure that the standards address safe bicycle accessibility and promote bicycle friendly environments.
- b. Identify Cornerstone 2020 plans goals and policies that should be revised or created to support implementation of the Bike Master Plan.

2.10 Integrate public spaces with adjacent businesses

- a. Develop a bike rack program for business owners to improve their bicycle parking.
- b. Work with parking garage owners and management companies to eliminate the "caution, vehicles exiting" warning message to focus the message on the drivers instead.

2.11 Develop guidelines for car-free and shared space streets

- a. Begin to implement shared space streets, with a commitment to developing guidelines and protocols for implementation. Explore possible locations for shared-space streets through examining space allocation in the right-of-way (e.g., narrowing streets, car-free-only streets, woonerfs).
- b. Expand program of 2nd Sunday (car-free streets) each year. Focus on locations with strong community interest. Sustain and expand summer street closures in major parks.
- c. Pilot a Car-Free Weekend program, in which Louisvillians are encouraged to live car-free for an entire weekend.
- d. Pilot a Car-Tuesday event, in which Louisvillians are encouraged to live car-free for an entire day.

2.12 "Coordinate transit stop and bikeway accessibility needs between Louisville and the Transit Authority of River City (TARC)"

- a. "Develop a program that evaluates transit stops and bikeways 1/4 mile in each direction from the stop."
- b. Coordinate with TARC on efforts to provide better service as reflected in TARC's strategic plan.
- c. Coordinate with TARC to improve bus stop amenities such as bike racks, shelters, lighting and service information.

2.13 "Create a parking strategy to encourage trip-chaining by cycling"

- a. "Broker joint-use parking agreements, supported by site plan review process that rewards joint-use parking elements, i.e., expedited review/permitting."
- b. "Joint Use Parking consider when two or more uses on the same or separate properties are located along a transit route and have different peak use times."
- c. "Establish a set aside of avoided parking construction costs for bicycle-friendly facilities."
- d. Use developer set asides (see item "a" above) from reduced parking requirements to pay for bicycle-friendly facilities.

**Identify a long-term
and sustained
investment strategy...**

Programs

3.1 Identify a long-term and sustained investment strategy to fund bicycle improvements

- a. Develop a strategy to allocate a reasonable and sustainable amount of funding for bicycle improvements and maintenance, including reallocation of transportation funding to prioritize bicycles.
- b. Develop a framework for resource allocation to guide investment decisions between programmatic and project delivery needs.
- c. Continue to work with regional and state agencies to improve funding criteria so that non-motorized projects are competitive for as many fund sources as possible.
- d. Explore innovative funding tools for both general bicycle improvements and specific needs.

3.2 Establish and implement a predictable maintenance cycle for bike lanes and signage

- a. Define a maintenance cycle for bike lanes restriping to ensure that markings are clear and highly visible to drivers and bicycles. Identify maintenance cycles appropriate to levels of intersection use for metro maintenance, as well as guidance for utility or other private development work. Revise internal tracking and communication tools to reflect changes.

3.3 Implement and evaluate enhancement and enforcement programs

- a. Continue to fund and implement bicyclist emphasis patrols (e.g., targeted campaigns). Identify appropriate locations for focused enforcement efforts, including in the high priority areas identified in the plan. Evaluate the effectiveness of bicycling citations on improving bicycle safety.
- b. Develop a pilot program to measure the success of existing enforcement and engineering efforts at intersections.
- c. Develop an aggressive Enforcement Program that includes zero tolerance penalties for speeding in a school zone and parking in bike lanes.

3.5 Advance a social marketing campaign to promote bicycling

- a. Design and implement a bicycle safety education campaign that targets drivers and bicycles.
- b. Retain a marketing consultant to develop a social marketing program to promote bicycling. Focus on the role of bicycling in promoting health (e.g., the health impacts of short trips), bicycling as a cost-saving approach (e.g., save money on gas), bicycling as a conservation measure (e.g., improve the environment), and the impact of bicycling on community building (e.g., meet your neighbors). Evaluate the effectiveness of the campaign.
- c. "Use public service announcement traffic reports to provide bicycling information such as: remind drivers that "bicycles are everywhere", announce "good" intersections, advise bicycle network detours due to construction or special events."
- d. Publicize the number of bicycle-vehicle crashes.
- e. Share marketing techniques and approaches to effectively promote services, programs, and facilities that support bicycling
- f. Develop an effective encouragement program that includes family safety audits, crossing guards at targeted intersections, community policing and neighborhood watch activities during bicycling to/from school times, and information about SRTS for those involved in designing environments in which children walk or bicycle to school.
- g. Explore partnerships with private organizations to fund incentive programs and events that encourage bicycling.



3.6 Create or expand programs that promote the benefits of bicycling

- a. Expand programs that promote bicycling for physical and mental health.
- b. Create more Car-free neighborhood guides such as the guide for the Clifton Neighborhood.
- c. Expand auto trip reduction programs to encourage more people to travel by means other than the private automobile (including by bicycling). Increase the number of people participating in a Metro-sponsored commute trip reduction program each year.
- d. Explore the possibility of a "Ride Free" day (or other lower cost promotional activities) on all local and regional transit to encourage people to bicycle and take transit instead of driving.
- e. Bike To Work Day, Week and Month
- f. "Encourage employer-based programs that offer incentives to bicycle and use transit with disincentives to drive."
- g. "Offering employees a choice between bus passes and free parking. "
- h. Continue to promote Louisville as a bicycle friendly at the national, regional and local level.
- i. Continue neighborhood walkability assessments for neighborhoods, incorporating assessment information into the inventory.
- j. Develop criteria and review process for comment based on physical activity and environmental impacts of all new projects. Use existing processes as models for Louisville, such as Decatur, Georgia.

3.7 Increase school-specific bicycle programs

- a. Create a Safe Routes to School program and team to evaluate engineering needs at all Louisville Metro schools and apply for SRTS funding.

- b. Explore partnerships with private schools to expand Safe Routes to School Program to these schools.
- c. Develop Safe Routes to Transit and Safe Routes to Parks programs, including infrastructure improvements (e.g., bikeways, signs) and safety education for various user groups.
- d. Develop a strong safety education program that includes videos for kids, mandatory street-crossing education and bicycle education programs as part of the physical education/practical living curriculum.

3.8 Create materials to communicate general travel and right-of-way information

- a. Add bicycling routes to My Neighborhood Maps site.
- b. Expand bicycle way finding efforts Metro wide, to include maps, signage in the right-of-way, and web-based tools. Focus way finding at transit stops, to encourage coordination of bicycling and transit trips.
- c. Expand mapping to support bicycles through the following steps: 1) Develop bicycling maps for all Louisville neighborhoods; 2) Compile existing neighborhood bicycling maps to create a "master" bicycling map for Louisville 3) Develop thematic bicycling maps/routes for Louisville (e.g., on road and off road bicycling facilities).
- d. Collaborate with Metro and TARC to improve bicycle connections to destinations through on-board destination/way finding guides, stop announcements linked to destinations, flexible routing for events, and better marketing of services and destinations.

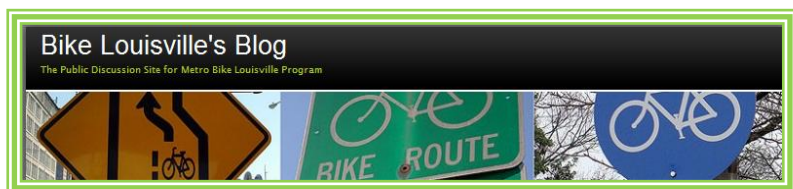
3.9 Use social networking to communicate project information in a timely and efficient manner

- a. Communicate project information to those affected in a timely and efficient manner through development of neighborhood listservs and/or partnerships with local blogs.
- b. Simplify Louisville's online resources to improve usability, accessibility, navigability, and coordination.
- c. "Create a web-based community toolbox to fully engage residents in contributing to an on-going assessment of the bicycle network.
- d. Residents could use the toolbox for information-sharing and reporting, i.e., report repairs, identify "good" bicycling facilities, etc. Louisville could use the toolbox to communicate with the community on issues such as bike lane construction or closures. Montgomery County, Maryland's web-based program allows residents to track development projects can serve as a model.

Additionally, the Maryland

Department of

Transportation is using Google maps in developing a statewide trails network."



3.10 Develop and launch training modules for Louisville Metro staff

- a. Develop and launch training modules for Metro staff, including topics such as: implementation of recommendations from the bicycle Master Plan; project conceptualization, design, and construction (as multiple programs build bicycle facilities); accessibility needs of people with disabilities (training for all LMPW employees who participate in the planning, design, and construction of bicycle facilities); bicycle-appropriate intersection and crosswalk lighting schema (provided by Lighting Design Lab); and alternative sidewalk standards and maintenance requirements.
- b. Improve regional coordination around bicycle issues through training modules.

3.11 Establish better communication and coordination among staff and departments working on related issues

- a. Establish Bike Louisville partnerships to encourage bicycling, and transit use through coordination for these modes (e.g., prioritize bicycle access to stops and services when planning for transit service/route changes).

3.12 Revise and update the plan, its data module, and the project list regularly

- a. Revise and update the bicycle Master Plan every five years.
- b. Update the Plan's data module and project list annually (with a significant data update anticipated when 2010 Census data is available).
- c. Develop and distribute geocoded capital projects list so that all departments have timely information about Metro projects to facilitate internal coordination and leveraging opportunities.
- d. Evaluate data collection and management processes/needs to determine appropriate data for use in tracking success of plan and identifying future improvements.
- e. Maintain and update inventories of assets (e.g., the Bicycle System Network), including capture of capital projects.
- f. Track and report on plan performance measures.
- g. Coordinate stewardship of the Bike Master Plan with Bike Louisville. Ensure that necessary training is provided to assist Bike Louisville in this role.
- h. Submission of projects/programs
- i. Coordinate the transmission of Bike Master Plan data to a public interface for use by LMPW to provide readily available project information during the permitting and inspection processes.

3.13 Increase opportunities for driver education about bicycles


- a. Education/re-education as part of driver's license renewal. Change process to get license, e.g. on test; include bicycles or bicyclists as part of driving test. Conduct on-going educational process about changes. For example, show a video on bicycle safety at DMV offices. Reduce car insurance to reflect this.
- b. "Advocate for cell phone free areas for drivers and bicycles."


3.14 Increase opportunities for bicyclist education

- a. Provide bicycle education classes

3.15 Evaluate bicycle crash data as part inventory and assessment.

- a. Collect bicycle crash data.
- b. Assess bicycle crash data.

 **Collect bicycle crash data**

 **Assess bicycle crash data**